FTSE RUSSELL
An LSEG Business

Fixed Income Insights

MONTHLY REPORT – **DECEMBER 2023 | US EDITION**

FOR PROFESSIONAL INVESTORS ONLY

Treasuries front-run Fed easing, but caution on easing likely after 2021-22

The scale of the November rally in govt bonds suggests technical factors contributed, since central banks gave no indication of an early pivot, and although US growth has slowed, US core inflation of 4% remains. IG credit attracted demand, helped by absolute yield levels in the November rally and remains relatively cheap.

Macro and policy backdrop – US economy slows but continues to withstand 2% real yields without major stress

Only in Europe, where growth stalled in Q3, have predictions of recession, or near recession, been vindicated. (pages 2-3)

Yields, curves and spreads – Yield curves re-inverted as markets anticipate policy easing. US spreads tightened

A bull inversion in November reversed the bear steepening of October. US spreads remain pro-cyclical. (pages 4-5)

Credit and MBS analysis – IG credit spreads narrowed in the November rally. RMBS spreads also ticked down

Having underperformed during the period of rising yields, IG attracted investors in November, and spreads narrowed. (page 6)

Sovereign and climate bonds – Green corporate spreads tightened further, continuing recent outperformance

The “greenium” in green bond spreads has been restored in 2023. Adjusted-climate WGBI outperformance trimmed. (page 7)

Performance – Long dated gilts, Treasuries and Bunds led November rally, in reversal of the Q3 & October sell-off

G7 govt markets enjoyed strongest month since tightening began, led by longs. Both IG and HY credits rallied. (pages 9-10)

Appendix (from page 11)

Global bond market returns, historical bond yields, bond market durations and market values and foreign exchange returns.

Chart 1: Increased divergence in nominal and real yields has been notable in 2023, particularly in Bunds vs Treasuries and gilts. Breakevens have moved little, apart from the increase in Japan.

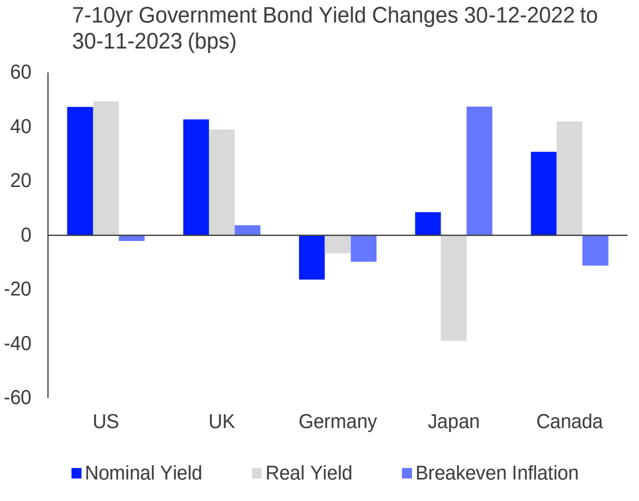
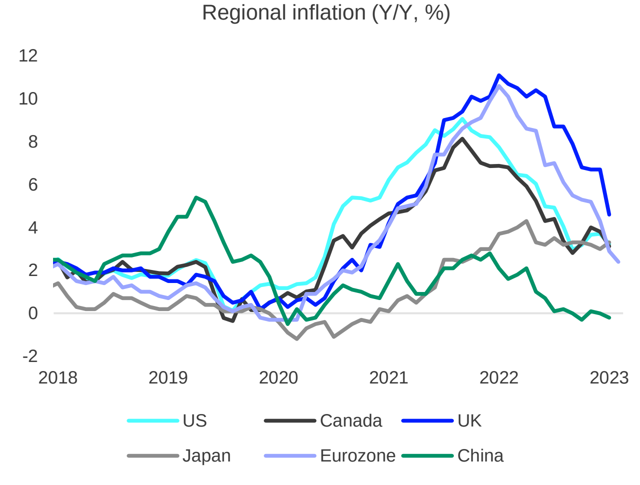


Chart 2: There is less dispersion in G7 inflation after the latest data. But output costs of disinflation tend to be higher at lower inflation, so squeezing inflation down to 2% targets remains a policy challenge.



Source: FTSE Russell and Lipper. Data available as of November 30, 2023. Past performance is no guarantee of future results. This report should not be considered ‘research’ for the purposes of MIFID II. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix for list of indices used for each market.

Macroeconomic Backdrop – Growth and Inflation Expectations

Despite the scale of policy tightening, consensus growth forecasts show no G7 recessions in 2024. A marked narrowing in the US growth differential over Europe is forecast , and oddly, higher growth for Europe in 2024, than in 2023. Inflation dispersion is forecast to decline, with Chinese inflation rising towards 2%. The soft landing for the US economy in 2023 suggests the US may be better able to withstand 5% rates than assumed, and that the Fed's R* may have increased.

Consensus 2024 forecasts show faster US than European growth, but with the differential narrowing (Chart 1).There are no outright contractions forecast, despite growth flat-lining in Europe in Q3, and the constraints on easing Eurozone fiscal policy particularly. Uncertainties surrounding Chinese forecasts are also high, though the Chinese authorities do have scope to reflate demand further. Early US Q4 growth indications show a notable slowdown to 2.1% from 5.2% annualized growth in Q3 (Atlanta Fed Nowcast).

Headline inflation fell again in October, helped by weaker energy prices, and base effects. Chart 2 shows less dispersion in 2024 inflation forecasts, even if dispersion remains high by pre-Covid levels. US core inflation exceeded headline inflation rates since March 2023, but slowed to 4% in October y/y. Weaker demand may allow core inflation to fall further in Q4, but slower GDP growth may also put some upward pressure on US unit labour costs in Q4, and the output costs of achieving 2% inflation may be non-linear.

US employment growth has slowed, and unemployment ticked higher to 3.9%, as Chart 3 shows but there is little convincing evidence of labor shedding. Indeed, labor hoarding has been a feature of the cycle in 2022-23, suggesting employers fear shortages as recovery proceeds. The soft landing in the labor market gives the Fed more policy options, with little rush to change policy.

Chart 4 shows the 2022-23 increase in US yields has taken both nominal and real 10-year yields back to pre-GFC, Goldilocks levels of the early 2000s. A higher share of fixed rate mortgages, and high levels of corporate borrowing at low rates in 2020-21 may have reduced the impact of Fed tightening and the interest rate sensitivity of the economy. AI-driven productivity gains would also be consistent with a higher marginal product of capital and higher real yields, though it is too early to see that in the data.

Chart 1: Consensus growth forecasts for 2024 show a continuation of US exceeding European growth, but by less than in 2023, as Fed tightening squeezes employment and demand. China remains most unpredictable.

Latest Consensus Real GDP Forecasts (%, November 2023)			
	2022	**2023**	**2024**
US	2.1	**2.3**	**1.1**
UK	4.1	**0.4**	**0.4**
Euro Area	3.5	**0.5**	**0.7**
Japan	1.6	**0.8**	**1.0**
China	2.8	**5.0**	**4.4**
Canada	3.5	**1.1**	**0.7**

Chart 2: Consensus inflation forecasts show notable revisions higher to both UK, US and Japanese inflation, for 2023 and 2024, but sizeable revisions lower to Chinese and Eurozone inflation in 2023.

Consensus Inflation Forecasts (%, November 2023)				
	2023	*Change Since Jan-23 (Bps)*	**2024**	*Change Since Jan-23 (Bps)*
US	**4.2**	*50*	**2.7**	*20*
UK	**7.4**	*40*	**3.0**	*50*
Eurozone	**5.6**	*-40*	**2.7**	*20*
Japan	**2.9**	*110*	**2.2**	*90*
China	**0.5**	*-180*	**1.8**	*-50*
Canada	**3.9**	*20*	**2.5**	*30*

Chart 3: Recent US payroll reports suggest cooling in the US labor market, and wage inflation has slowed, with stable inflation expectations confirmed in breakevens. The soft landing in the labor market is rare.

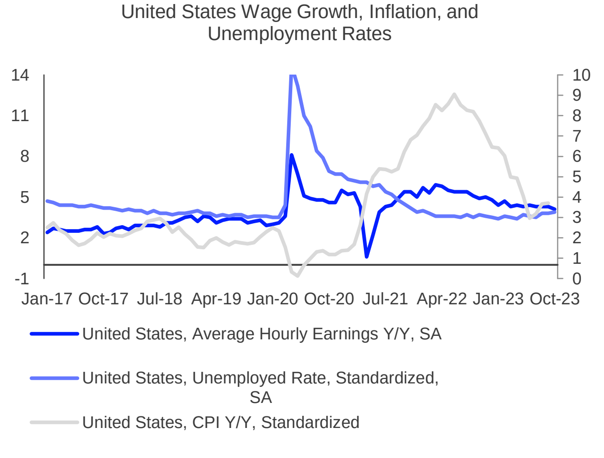
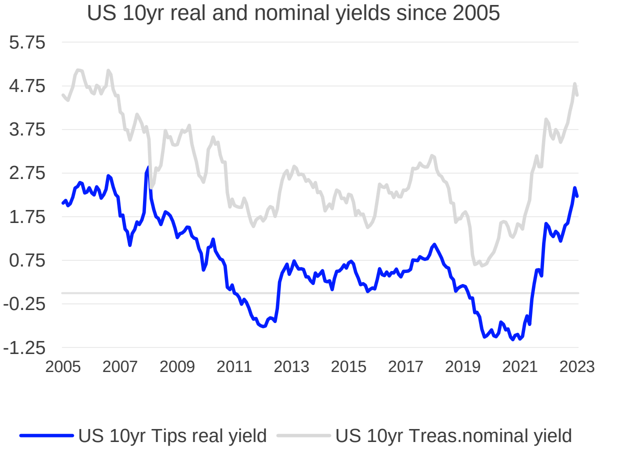


Chart 4: US nominal and real yields have returned to levels last seen in the Goldilocks period, notwithstanding the October/November rally, with little evidence to date the US economy cannot sustain higher real yields.



Source: FTSE Russell and LSEG. Available data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Financial Conditions and Monetary Policy Settings

Financial market sentiment shifted sharply in November, as risk appetite recovered, and financial conditions eased, but the robust economy suggests no early Fed easing, even if markets are front-running policy easing again, with 10s/2s re-inverting. The dollar fell back on US easing expectations and divergent economies suggest easing cycles will be less co-ordinated. Pressure for fiscal policy activism may increase in 2024, but debt/GDP ratios impose important constraints.

US homeowners benefited from years of price appreciation, from 2012-13 onwards (Chart 1), and now have substantial wealth tied up in housing. Following a Covid spike, house prices fell in 2022-23, reducing homeowners' equity modestly, but less sub-prime mortgages and high employment have kept mortgage delinquencies near record lows. Housing supply has also been reduced by mortgage lock-ins as homeowners sit tight with low coupon mortgages rather than refinance at higher rates (see Chart 5, page 6).

The US dollar fell sharply in November, as markets priced in Fed easing by mid-2024, after lower US inflation and signs of weaker growth in Q4 (Chart 2). The risk rally also favored the Euro. More hints from the BoJ about the end of curve control helped the yen recover from the Y150 level versus the US dollar. Some easing in rate differentials also helped the renminbi.

The Fed, BoE and ECB were given a little more room for maneuver by lower October inflation data, signs labor markets are cooling, and inflation expectations remaining anchored (Chart 5 on page 4). This would suggest more extended policy pauses until Q1 2024 at least (Chart 3). After criticism for reacting too slowly to higher inflation in 2021-22, it seems likely central banks will be cautious about easing policy quickly, and particularly the Fed, with the economy still enjoying a relatively soft landing.

Yield levels in the US are close to Goldilocks levels (see Chart 4 on page 2), but a key difference for policy-makers is the higher level of public debt to GDP in 2023, as Chart 4 shows. Debt service costs have already become a major element in public deficits, given low real growth. Infrastructure demands, and central bank counter-inflation policy suggest fiscal policy becoming more active, or neo-Keynesian, in demand management, but Eurozone fiscal rules may constrain this and deepen political differences in the US.

Chart 1: US homeowners suffered a modest equity loss in recent house price falls, but much less than the sizeable loss of equity after the GFC. The Chart also shows the extent of consumer wealth in housing.

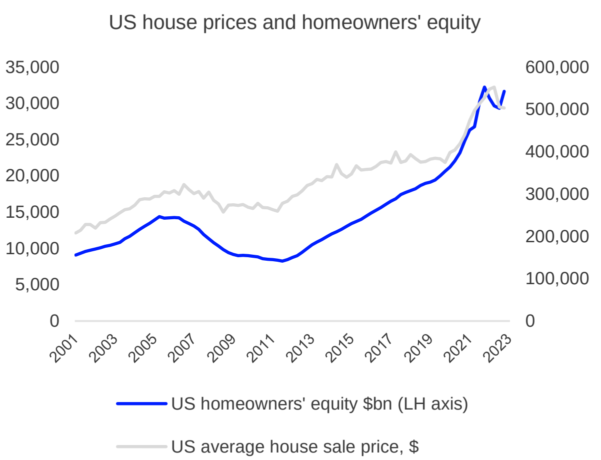


Chart 2: The dollar fell back sharply in November, as markets rallied and brought forward Fed easing expectations to mid-2024. Even the yen recovered a little as the BoJ edged closer to ending curve control.

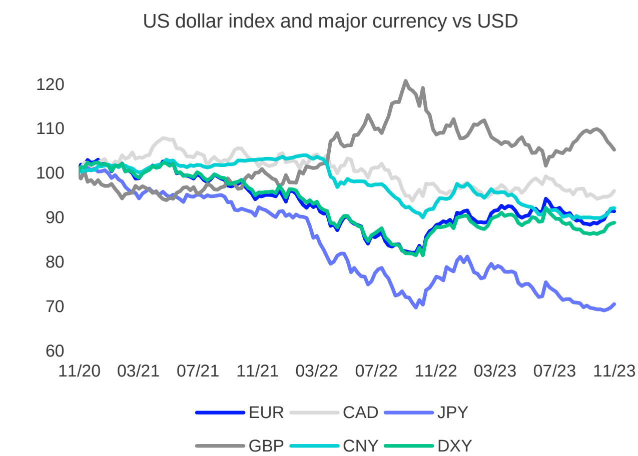


Chart 3: After lower October inflation numbers, and GDP growth near zero in Europe in Q3, G7 central banks are more firmly on hold, led by the US Fed. The PBoC faces a different deflationary challenge.

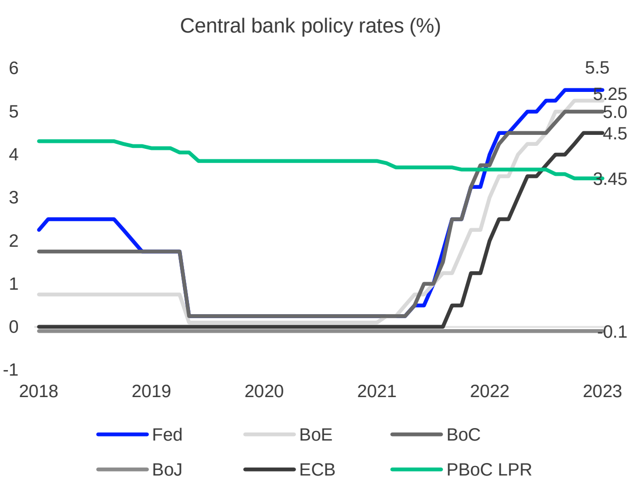
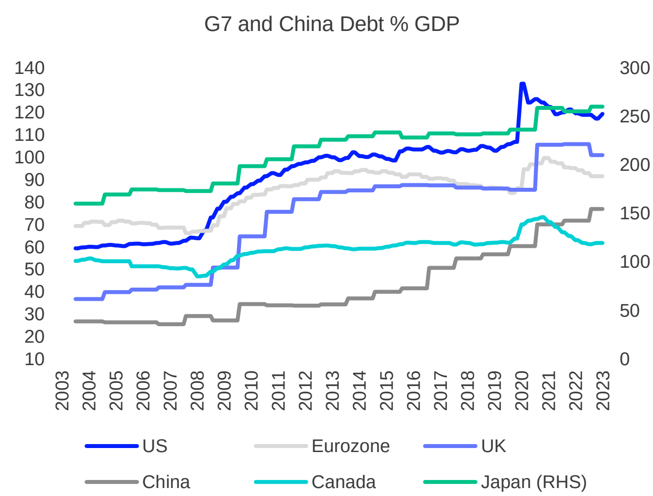


Chart 4: Although there are similarities with the Goldilocks era in 2023 – yield levels, policy rates and a possible IT driven productivity surge – a key difference for policymakers is the level of public sector debt to GDP.



Source: FTSE Russell, LSEG, US Federal Reserve. Data available as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Global Yields, Curves and Breakevens

Chart 1: 7-10yr yields fell by similar amounts across the G7 in November, after US yields rose a little more in October. All markets joined the November rally after lower inflation data and central bank policy pauses.

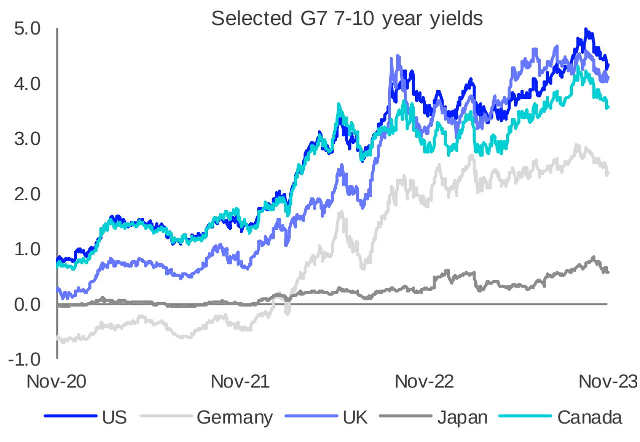


Chart 2: Real yields fell on linkers, as investors modestly revised down rate expectations for central bank policy rates in 2024. Lower inflation and weak growth in Europe helped keep real yields below Tips levels.

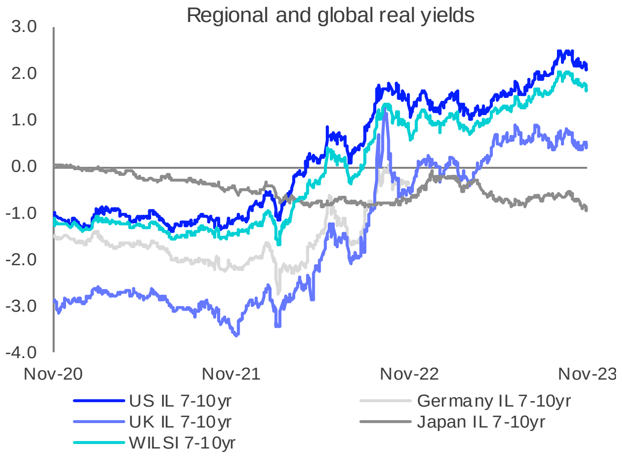


Chart 3: Yield curves re-inverted as 7-10yr yields fell sharply in the rally, and 1-3yr yields were constrained by central bank policy rates. The JGB curve flattened after several months of testing the BoJ 1% yield ceiling.

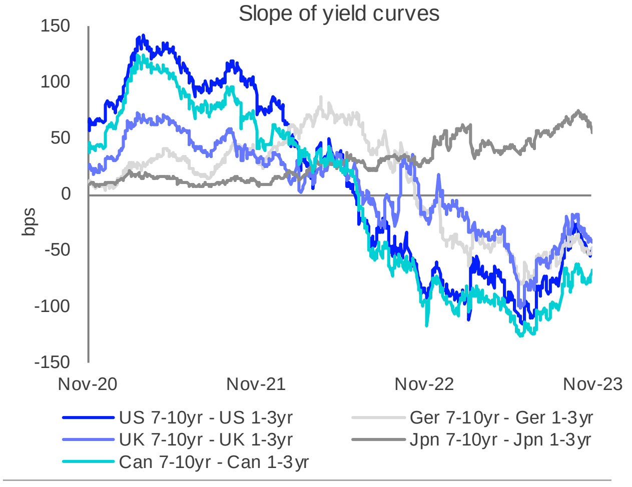


Chart 4: Long maturities also rallied, unwinding some of the recent dis-inversion, as investors began to re-focus on re-investment risks. The Canadian curve remains the most inverted in 20+yrs versus 1-3yrs.

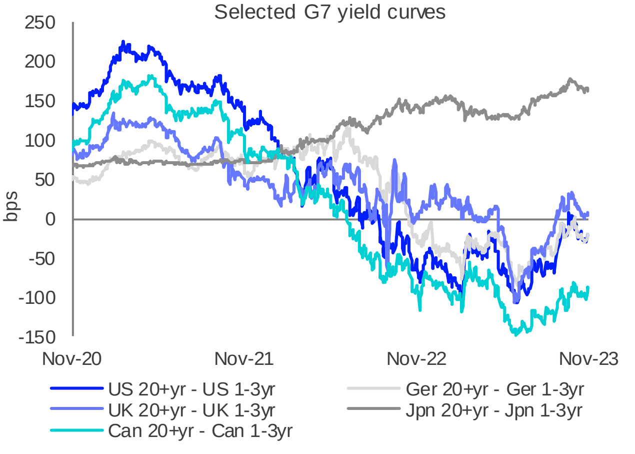


Chart 5: JGB breakevens continue to increase, relative to other G7 breakevens. US 7-10yr breakevens fell in November as nominal yields dropped relative to real yields, after lower inflation data, as in the UK.

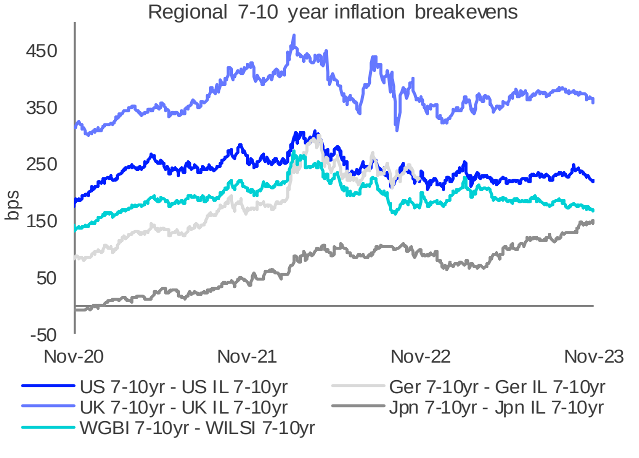
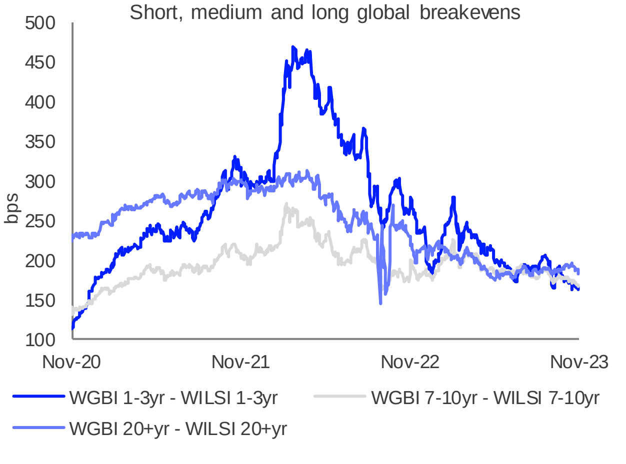


Chart 6: Short dated inflation breakevens fell sharply in November, after lower-than-expected inflation data, showing the normal strong correlation with spot inflation rates. 7-10yr breakevens also fell, to lows for the year.



Source: FTSE Russell and LSEG. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices. For professional investors only.

Yield Spread and Credit Spread Analysis

Chart 1: US sovereign spreads narrowed in November, and repeated the normal pro-cyclical pattern, rising during periods of rising yields, and falling when yields decline. The biggest moves were versus Bunds and gilts.

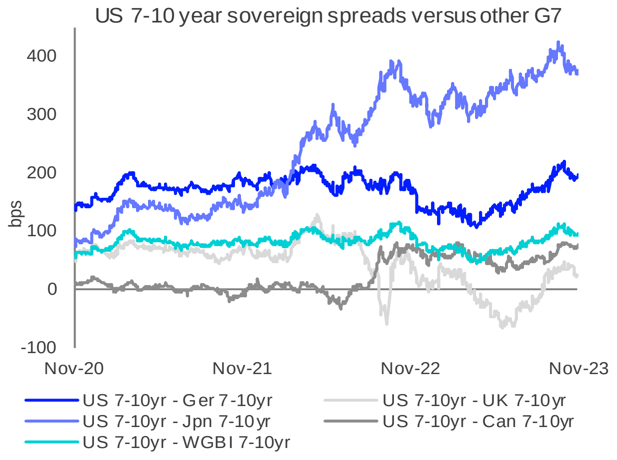


Chart 2: Italian sovereign spreads fell sharply in November, after the sharp decline in Eurozone inflation, though spreads barely moved versus the US, as US Treasury yields fell significantly in the month.

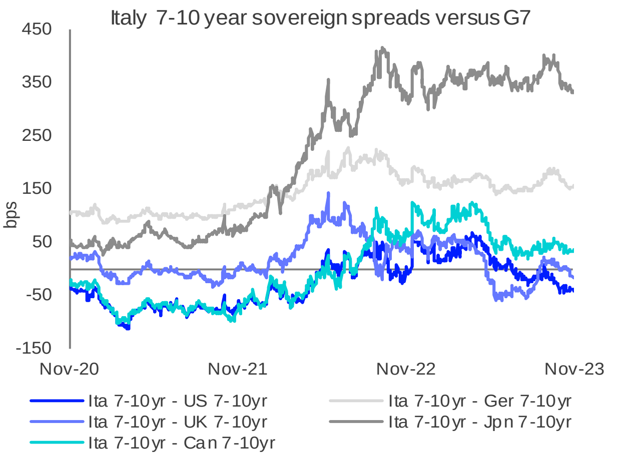


Chart 3: EM sovereign spreads widened a little in the 7-10 year area, mainly because G7 yields fell sharply in the November rally, though this follows general spread tightening since 2021, apart from versus Japan.

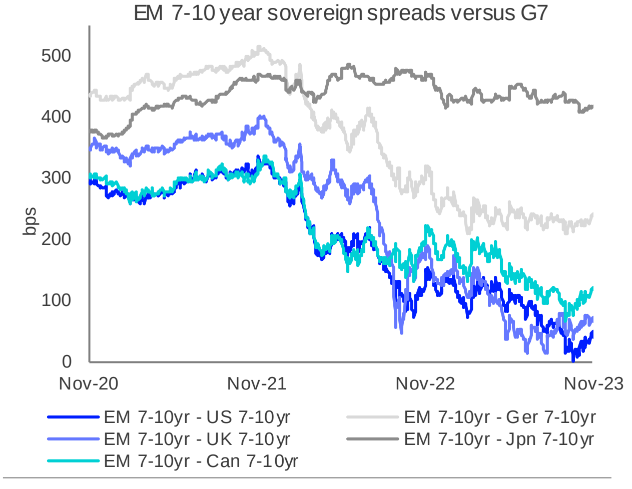


Chart 4: It is a similar story in China on sovereign spreads, which widened versus the G7 in November, following protracted tightening in 2023. Moves were limited versus Bunds, since yields fell less in Germany.

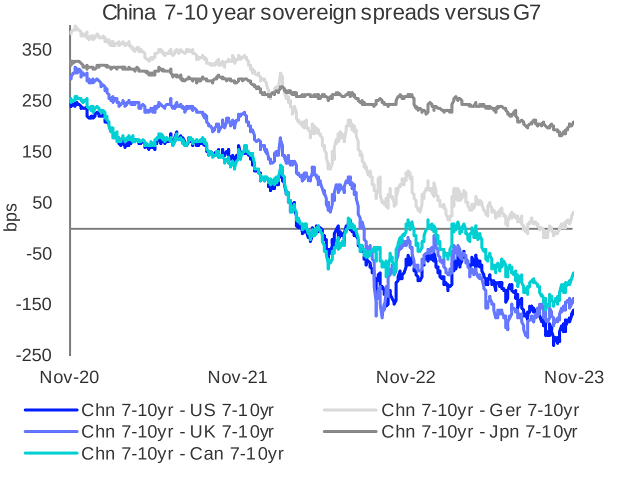


Chart 5: Credit spreads fell in November, despite the sharp drop in govt bond yields in the 7-10 year area. High yield joined the rally, reflecting a recovery in risk appetite, strong stock markets and correlation with HY.

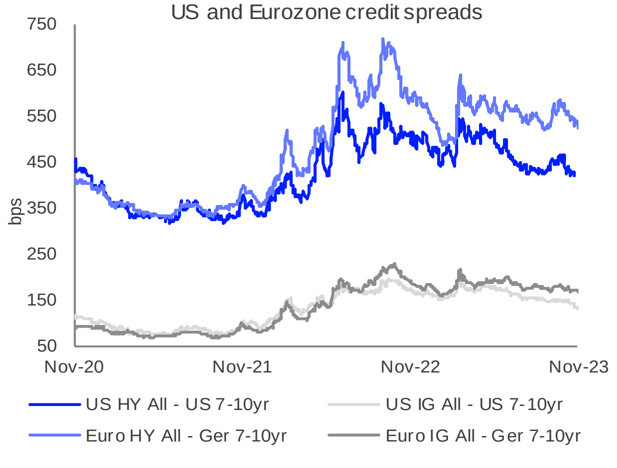
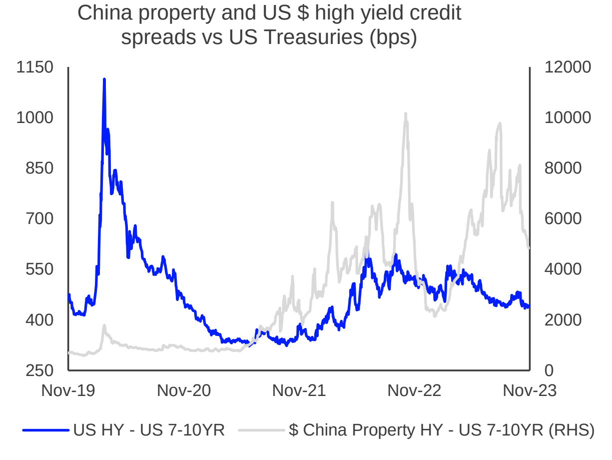


Chart 6: The HY rally extended to Chinese $ HY spreads, which eased to 4800bps in November, as regulators mulled supportive measures for property sector finance from the banking system.



Source: FTSE Russell and LSEG. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices. For professional investors only.

Credit sectors and RMBS analysis

Chart 1: US real estate spreads tightened in recent months, after widening in 2022 on concerns over office space, and higher rates. This may reflect re-assessment of the sector with yields at post-GFC highs.

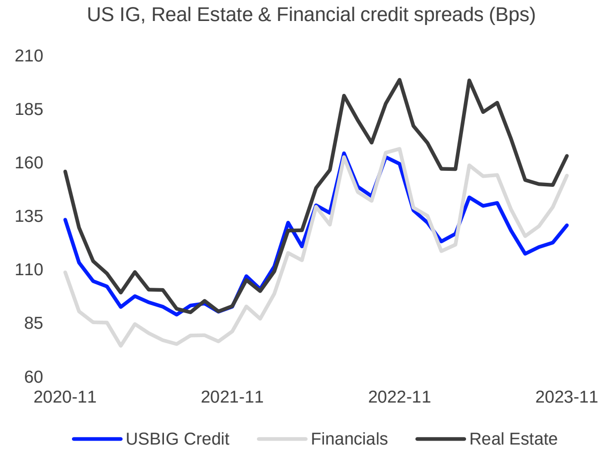


Chart 2: Energy spreads continue to show high volatility but tightened in November, with gas utilities. The level of yields on high quality IG credits proved attractive to investors, back at pre-GFC levels.

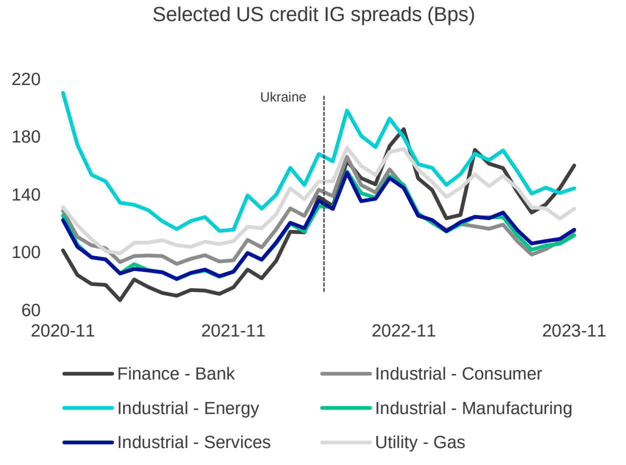


Chart 3: Eurozone credit spreads show some unwinding of the spike in insurance spreads after the Ukraine war shock.in 2022. But IG spreads are still above pre-Ukraine war levels, unlike high yield spreads.

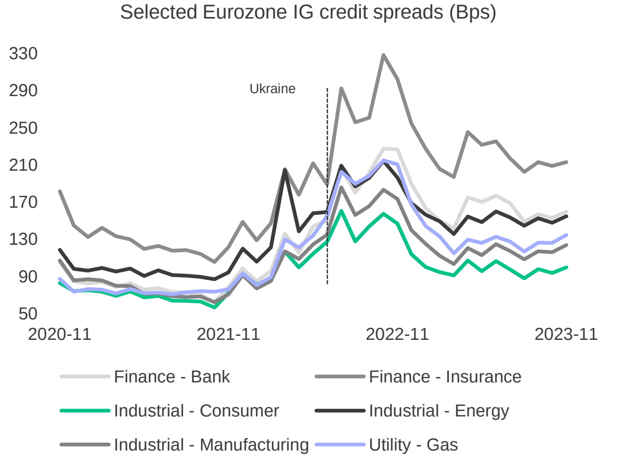


Chart 4: RMBS spreads have widened relative to IG spreads, as the Fed reduced its RMBS holdings by allowing balance sheet run-offs. RMBS's negative convexity has been an issue during the period of rising yields.

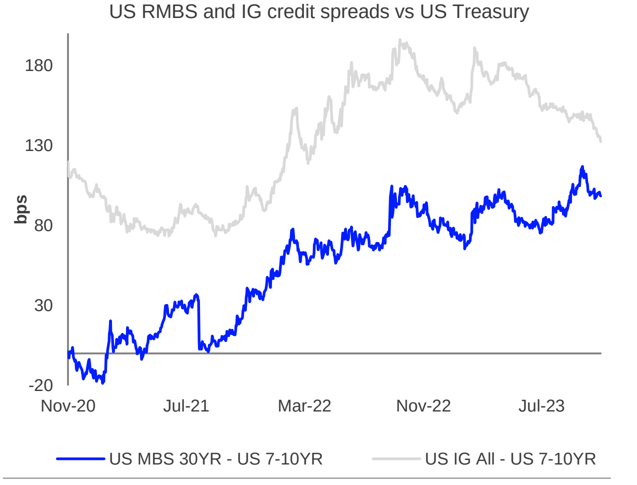


Chart 5: Mortgage refinancings remain depressed by high mortgage rates, as homeowners sit tight with low coupon mortgages from 2020-21. Thus, prepayment rate estimates remain very low for mortgage pools.

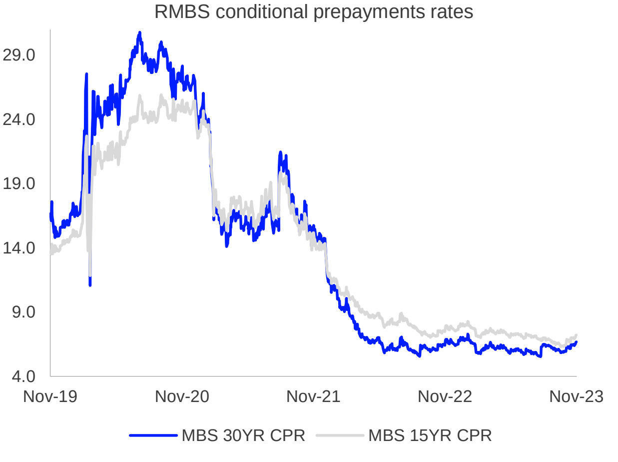
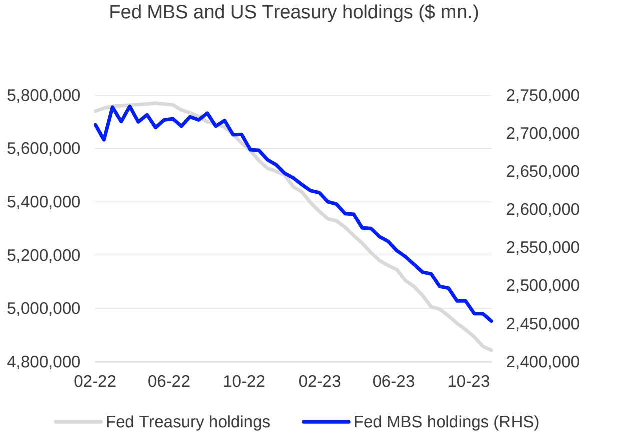


Chart 6: The Fed had projected faster reduction of its US Treasury holdings, relative to MBS holdings when QT began. Lower RMBS prepayments have also slowed the pace of RMBS run-offs.



Source: FTSE Russell and LSEG. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices. For professional investors only.

Sovereign and Climate Bonds Analysis

Chart 1: Sustainable fixed income Investment has evolved into a multiple index methodology asset class. A wide range of benchmarks in ESG, climate and carbon, show different performance characteristics.

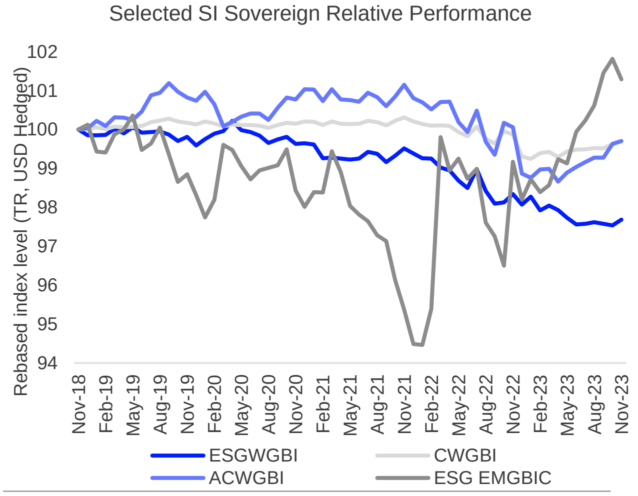


Chart 2. ESG WGBI has a higher US weighting, and big underweight in China, reflected in its underperformance in 2022-23. Adjusted Climate WGBI outperformed WGBI in 2023 after a re-weighting towards Europe.

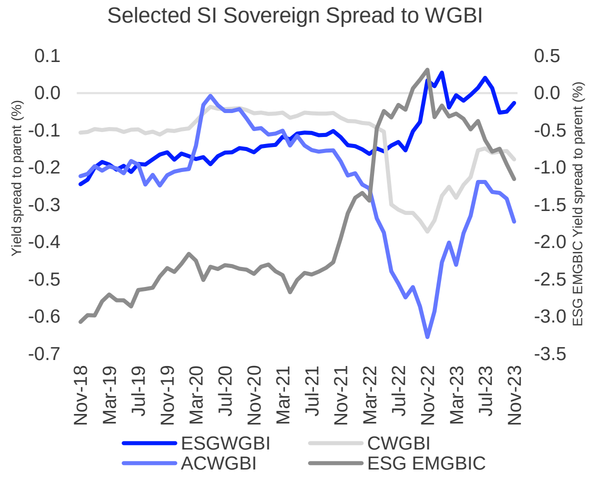


Chart 3: The Paris-aligned benchmark index (PAB Corp), with its heavy tilt away from carbon, outperformed strongly in the early Covid period, but underperformed since as energy recovered.

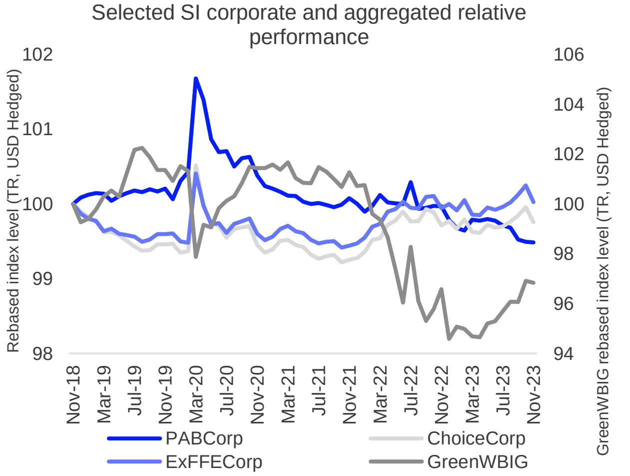


Chart 4: The "greenium" largely disappeared in Green corporates in 2022, after heavy issuance, as yields rose, as the Green WBIG spread move shows vs WBIG. But this has been restored in 2023.

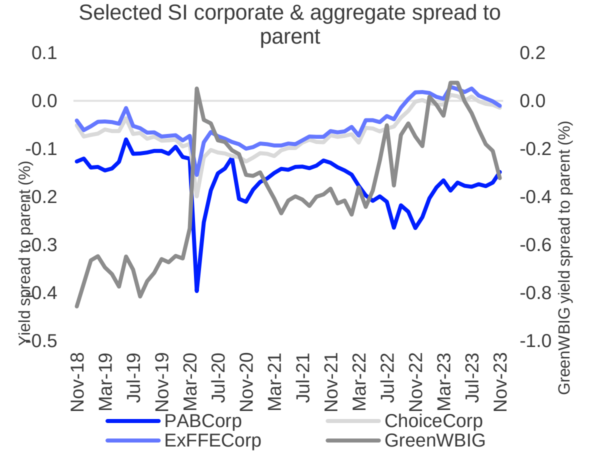


Chart 5: The November rally in govt bonds, and yield declines, favoured climate WGBI over WGBI, due to the extra duration in lower yielding Bunds and JGBs, though the moves were modest.

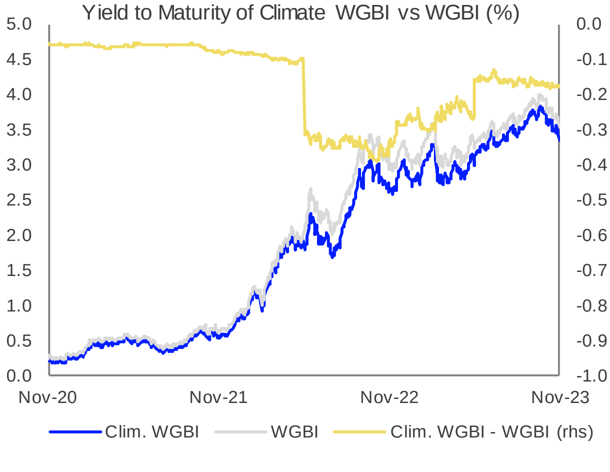
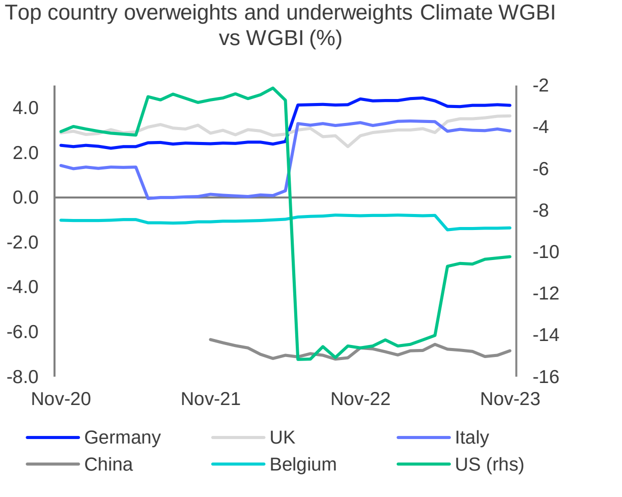


Chart 6: Changes in country weights in Climate WGBI impacted performance accordingly. The underweight in China, overweight in Europe caused the underperformance of Climate WGBI vs WGBI in 2022-23.



Source: FTSE Russell and LSEG. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

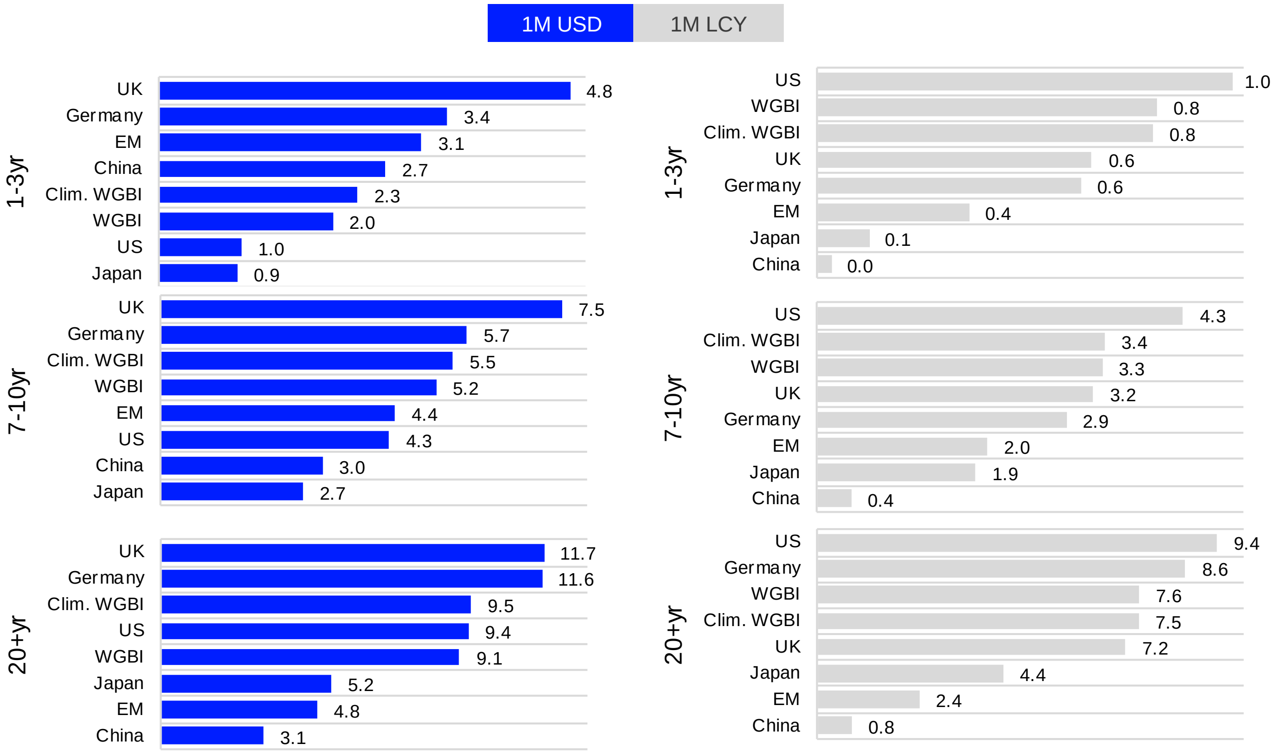
Global Sovereign Bond Returns − 1M and YTD % (USD & LC, TR)

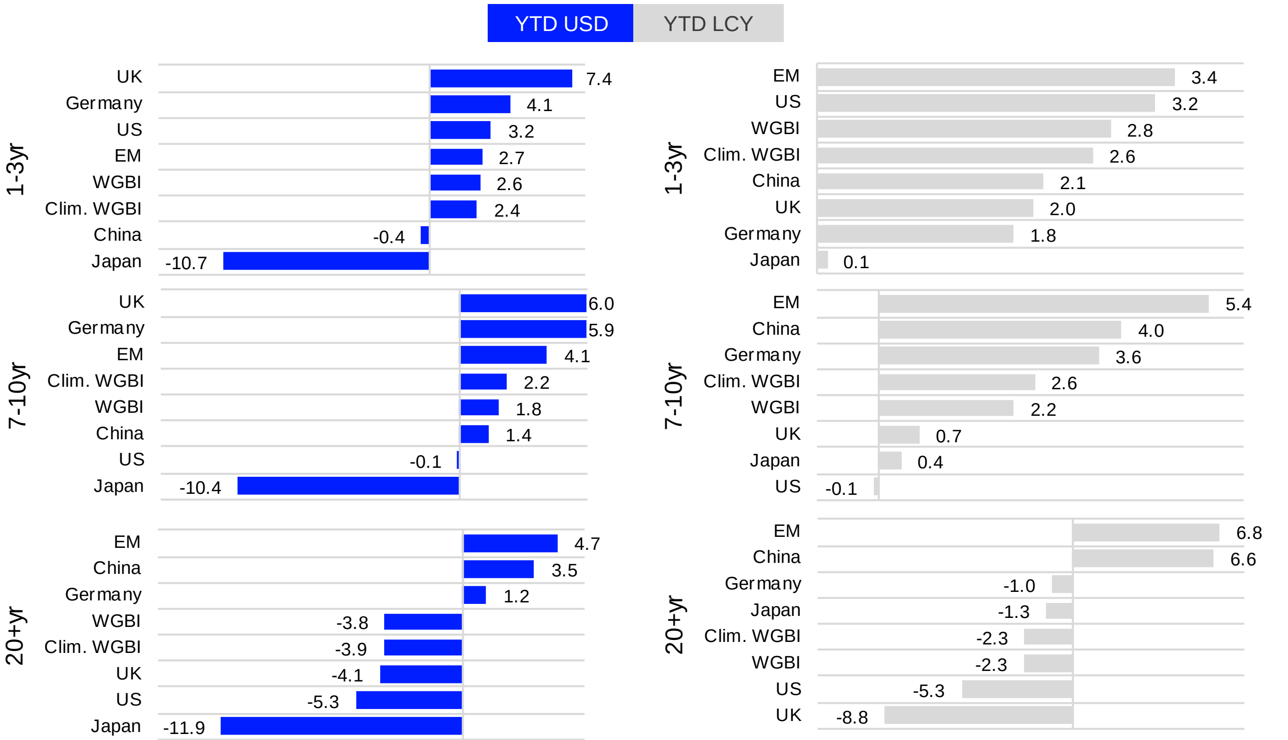
Long-dated gilts, Treasuries and Bunds led a strong rally in November, in a complete reversal of the early-October sell-off. Dollar weakness boosted returns in long gilts and Bunds for a dollar-based investor. China, JGB and EM bonds lagged the rally but showed gains of 3-5%. YTD losses remain substantial however, led by JGB losses of 10-12%.

The strength of the November rally in longs suggests the October sell-off may have cleared out stale long positions, leaving the market technically ready for a powerful rally. Improved inflation data and signs of weaker US Q4 growth were fundamental drivers.

YTD, sterling gains boosted returns in shorter gilts to 5-7% for a dollar investor, though long gilts, Treasuries and JGBs lost 4-12%, as policy tightening moves drove yields higher. Only long EM, Bunds and China bonds delivered positive returns YTD in dollars.

CONVENTIONAL GOVT BONDS





Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of Indices used for each market. For professional investors only.

Global Inflation-Linked Bond Returns − 1M & YTD % (USD, LC, TR)

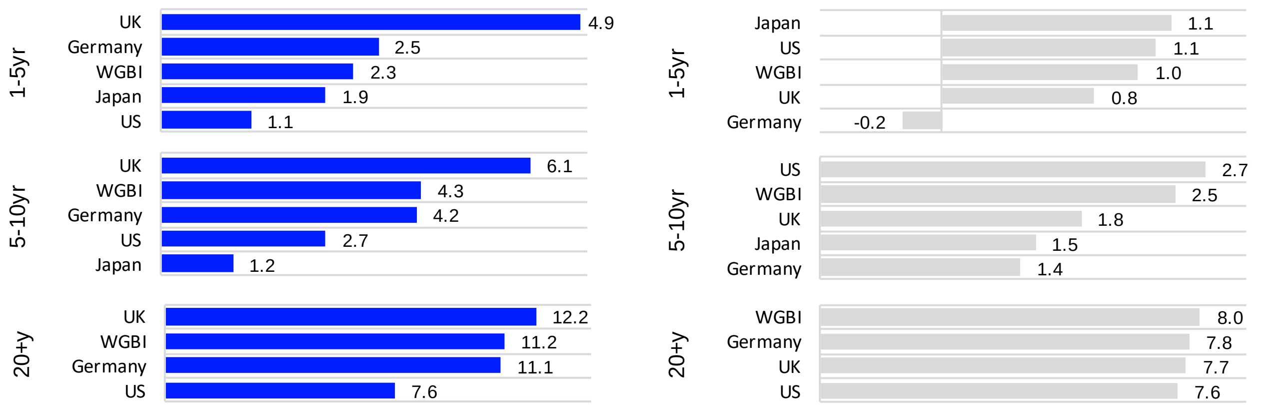
Longer inflation linked bonds rallied in November, as markets reversed some of the YTD losses, with gilt and Bund returns boosted by currency gains, in US dollar terms. Credit also did well, with US IG outperforming HY, though Euro HY remained the strongest performer both in November, and YTD with returns of up to 13%, boosted by the stronger Euro.

Linkers nearly matched long conventionals in the November rally, with inflation breakevens broadly stable, and gains of 10-11% in Bunds and UK linkers. Tips also gained nearly 5%. Credit joined the rally, as yields fell across the board, led by Euro HY.

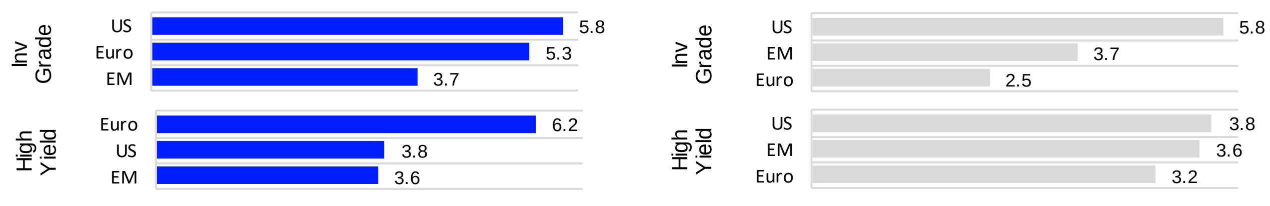
YTD losses were pared to 5-11% in Tips and UK linkers, though Bund linkers now show positive returns of 2-5% in dollar terms.

INFLATION LINKED BONDS

1M USD | 1M LCY

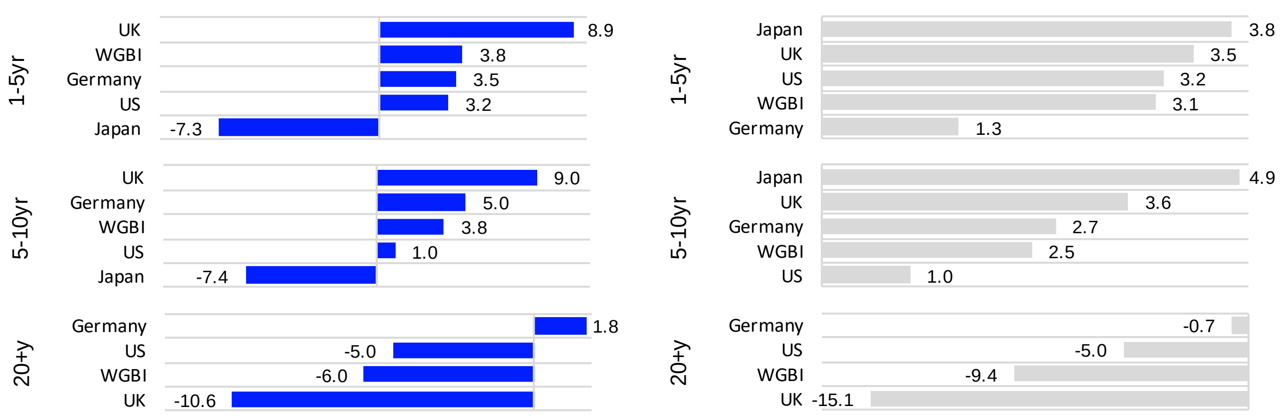


CORPORATE BONDS

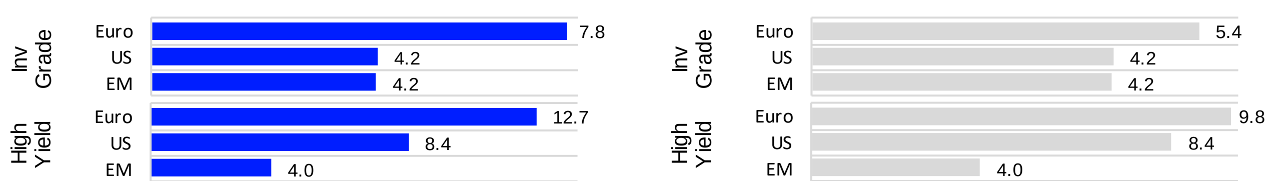


INFLATION LINKED BONDS

YTD USD | YTD LCY



CORPORATE BONDS



Source: FTSE Russell. All data as of November 30, 2023. This analysis is taken from 100+ FTSE Russell sub-indices. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of Indices used for each market. For professional investors only.

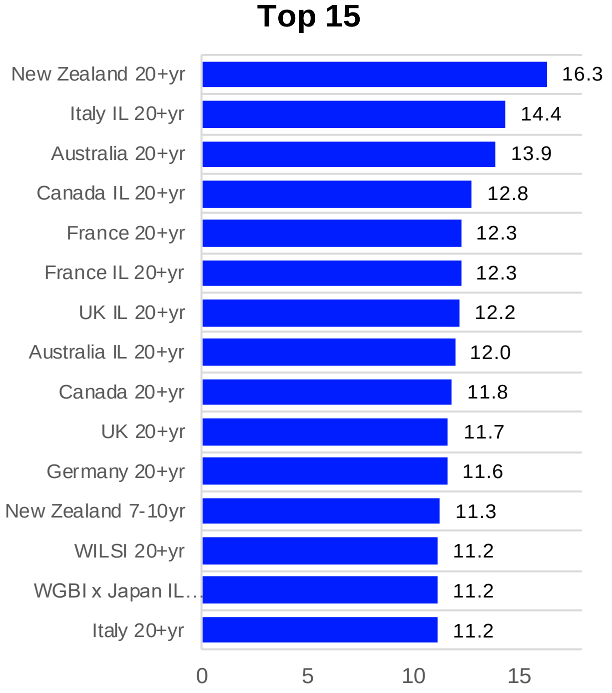
Top and Bottom Bond Returns – 1M & 12M % (USD, TR)

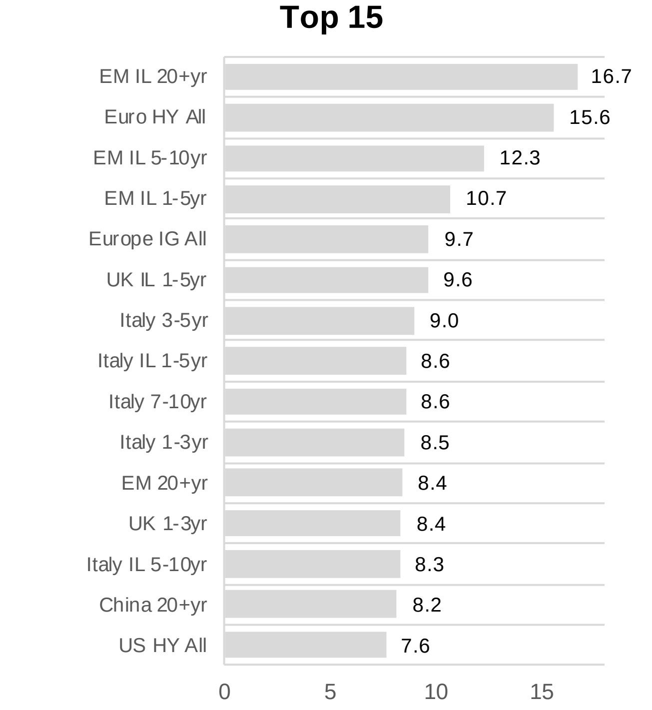
Long Australasian govts returned a substantial 14-16% in November, for a US dollar investor, as yields fell on the view the cyclical peak in rates is past, and currencies gained. Long EM linkers remain strongest on 12M, returning 17%. 12M returns still show the impact of duration when yields rise, in long UK gilts, linkers, and WILSI with losses of up to 23%.

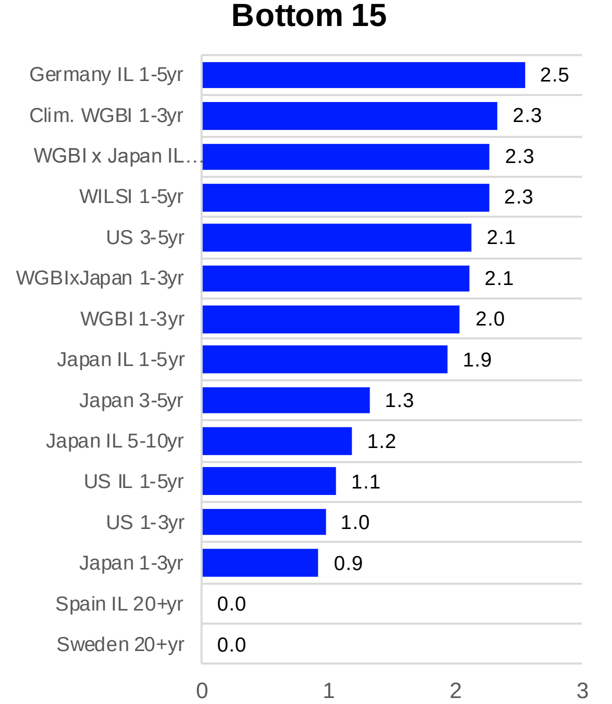
Long Euro, UK and Canadian bonds also returned 11-13% in November. The rally pared back 12M losses significantly in longer maturity bonds, in dollar terms, but the Bottom 15 returns are still completely dominated by long duration bonds.

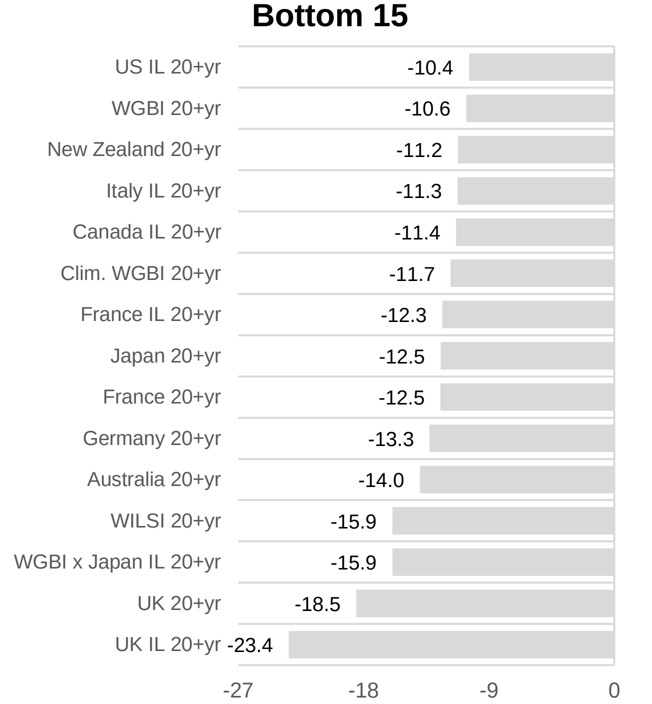
Credit features strongly in Top 15 returns on 12M, led by HY, with returns of up 16% in Euro HY, almost twice those in IG credit.

1M USD | 12M USD









Source: FTSE Russell. All data as of November 30, 2023. This analysis is taken from 100+ FTSE Russell sub-indices. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of Indices used for each market. For professional investors only.

Appendix − Global Bond Market Returns % (USD & LC, TR) – November 30, 2023

Government Bond Returns

Top 15% | Bottom 15%

Green highlight indicates highest 15%, red indicates lowest 15%

		3M		6M		YTD		12M	
		Local	USD	Local	USD	Local	USD	Local	USD
US	1-3yr	1.42	1.42	1.72	1.72	3.17	3.17	3.34	3.34
	7-10yr	-0.52	-0.52	-2.90	-2.90	-0.06	-0.06	-1.51	-1.51
	20+yr	-3.88	-3.88	-8.53	-8.53	-5.26	-5.26	-7.69	-7.69
	IG All	1.45	1.45	1.53	1.53	4.24	4.24	3.76	3.76
	HY All	1.12	1.12	4.47	4.47	8.45	8.45	7.62	7.62
UK	1-3yr	1.97	1.42	2.59	4.65	2.02	7.37	1.95	8.37
	7-10yr	3.13	2.58	2.79	4.85	0.68	5.96	-2.79	3.33
	20+yr	0.80	0.26	0.96	2.99	-8.85	-4.07	-17.45	-12.25
Euro	IG All	2.25	2.09	2.95	4.71	5.45	7.80	3.51	9.69
	HY All	3.25	3.05	5.35	7.20	9.84	12.66	9.03	15.61
Japan	1-3yr	0.04	-1.31	-0.11	-5.54	0.09	-10.66	-0.02	-5.63
	7-10yr	0.06	-1.29	-1.16	-6.53	0.38	-10.41	-1.18	-6.73
	20+yr	-1.66	-2.98	-8.58	-13.54	-1.28	-11.89	-3.50	-8.91
China	1-3yr	0.11	2.37	0.85	0.25	2.12	-0.44	2.34	2.51
	7-10yr	0.13	2.39	1.83	1.23	4.00	1.38	4.57	4.74
	20+yr	-1.46	0.44	3.03	2.10	6.55	3.55	8.34	8.17
EM	1-3yr	0.51	1.94	1.58	1.39	3.35	2.68	3.78	5.47
	7-10yr	0.32	1.09	1.62	1.20	5.43	4.13	6.17	6.82
	20+yr	-0.47	0.72	3.19	3.02	6.84	4.67	8.37	8.42
	IG All	1.42	1.42	1.39	1.39	4.21	4.21	5.42	5.42
	HY All	2.49	2.49	4.58	4.58	3.96	3.96	7.53	7.53
Germany	1-3yr	1.02	0.85	1.12	2.85	1.84	4.12	1.09	7.12
	7-10yr	1.38	1.22	0.60	2.32	3.62	5.94	-1.10	4.81
	20+yr	-0.65	-0.81	-3.10	-1.44	-1.02	1.19	-14.57	-9.47
Italy	1-3yr	1.38	1.21	1.90	3.65	3.28	5.59	2.44	8.55
	7-10yr	1.19	1.03	2.51	4.27	8.01	10.42	2.45	8.57
	20+yr	-0.96	-1.12	0.70	2.42	6.75	9.13	-7.12	-1.58
Spain	1-3yr	1.17	1.01	1.33	3.06	2.36	4.64	1.41	7.47
	7-10yr	1.64	1.48	1.48	3.21	4.69	7.03	-0.38	5.57
	20+yr	0.46	0.30	0.10	1.81	1.79	4.06	-10.23	-4.87
France	1-3yr	1.14	0.98	1.19	2.92	2.27	4.55	1.23	7.27
	7-10yr	1.41	1.25	0.80	2.53	3.76	6.07	-1.58	4.29
	20+yr	-0.02	-0.18	-1.84	-0.16	-0.28	1.95	-13.71	-8.56
Sweden	1-3yr	1.15	4.42	1.14	4.89	1.90	1.32	1.32	3.11
	7-10yr	2.23	5.53	-0.65	3.04	0.31	-0.26	-3.46	-1.76
Australia	1-3yr	0.60	2.69	0.85	2.61	1.87	-0.40	1.50	0.50
	7-10yr	-1.35	0.70	-3.24	-1.55	1.15	-1.10	-2.57	-3.54
	20+yr	-3.54	-1.54	-7.53	-5.92	-2.50	-4.67	-9.83	-10.73
New Zealand	1-3yr	1.83	5.21	1.52	3.71	3.56	1.13	3.40	2.83
	7-10yr	1.76	5.13	-2.03	0.08	1.04	-1.33	-1.34	-1.88
	20+yr	1.89	5.27	-8.01	-6.03	-5.09	-7.31	-8.93	-9.43
Canada	1-3yr	1.85	1.64	2.07	2.43	3.04	2.97	3.08	3.07
	7-10yr	1.24	1.03	-0.78	-0.43	0.61	0.54	-1.65	-1.66
	20+yr	1.94	1.73	-1.10	-0.75	0.59	0.53	-3.86	-3.87

Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Inflation-Linked Bond Returns

Top 15% Bottom 15%

Green highlight indicates highest 15%, red indicates lowest 15%

		3M		6M		YTD		12M	
		Local	JPY	Local	JPY	Local	JPY	Local	JPY
US	1-5yr	1.32	1.32	1.53	1.53	3.20	3.20	2.81	2.81
	5-10yr	-0.03	-0.03	-1.54	-1.54	1.04	1.04	-0.44	-0.44
	20+yr	-3.99	-3.99	-9.37	-9.37	-5.00	-5.00	-9.20	-9.20
UK	1-5yr	2.56	2.02	3.58	5.66	3.49	8.91	3.13	9.63
	5-10yr	2.01	1.46	3.42	5.50	3.59	9.02	0.79	7.14
	20+yr	-3.31	-3.83	-1.66	0.32	-15.10	-10.65	-22.35	-17.45
Japan	1-5yr	1.34	-0.03	2.36	-3.20	3.85	-7.32	3.71	-2.11
	5-10yr	1.53	-0.95	2.38	-4.27	4.91	-7.41	3.74	-3.17
EM	1-5yr	0.03	-2.30	6.40	3.34	10.51	9.94	11.50	10.72
	5-10yr	1.00	-1.65	5.39	3.42	9.31	10.73	11.06	12.31
	20+yr	0.56	-1.24	2.55	4.37	9.62	16.72	9.55	16.70
Germany	1-5yr	-0.14	-0.30	0.09	1.80	1.29	3.55	-0.51	5.43
	5-10yr	-0.35	-0.51	-0.57	1.13	2.74	5.04	-1.21	4.69
	20+yr	-3.86	-3.76	-7.89	-6.07	-0.69	1.80	-14.65	-9.32
Italy	1-5yr	0.94	0.78	1.98	3.73	3.74	6.06	2.45	8.57
	5-10yr	-0.60	-0.76	1.38	3.11	6.88	9.27	2.19	8.29
	20+yr	-5.86	-6.01	-6.17	-4.56	5.68	8.04	-14.42	-9.32
Spain	1-5yr	0.35	0.19	0.67	2.39	2.19	4.47	1.33	7.37
	5-10yr	0.04	-0.12	0.50	2.22	3.50	5.81	-0.03	5.94
France	1-5yr	-0.01	-0.17	0.02	1.73	1.46	3.72	-0.31	5.64
	5-10yr	-0.60	-0.76	-0.83	0.87	2.67	4.97	-1.98	3.87
	20+yr	-4.39	-4.54	-8.07	-6.50	-1.40	0.80	-15.77	-10.74
Sweden	1-5yr	1.17	4.44	1.42	5.18	2.73	2.15	2.76	4.57
	5-10yr	1.14	4.41	-0.49	3.21	1.37	0.79	-1.67	0.06
Australia	1-5yr	0.81	2.91	1.08	2.85	4.98	2.64	4.37	3.34
	5-10yr	-0.62	1.44	-1.64	0.08	4.82	2.48	2.47	1.46
	20+yr	-4.85	-2.87	-8.84	-7.25	0.51	-1.73	-9.03	-9.93
New Zealand	5-10yr	1.80	5.18	-0.63	1.51	4.46	2.02	4.58	4.00
Canada	20+yr	4.57	4.35	-2.46	-2.11	-6.38	-6.44	-5.97	-5.98

Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Global Bond Yields

Top 15% Bottom 15%

Green highlight indicates highest 15%, red indicates lowest 15%

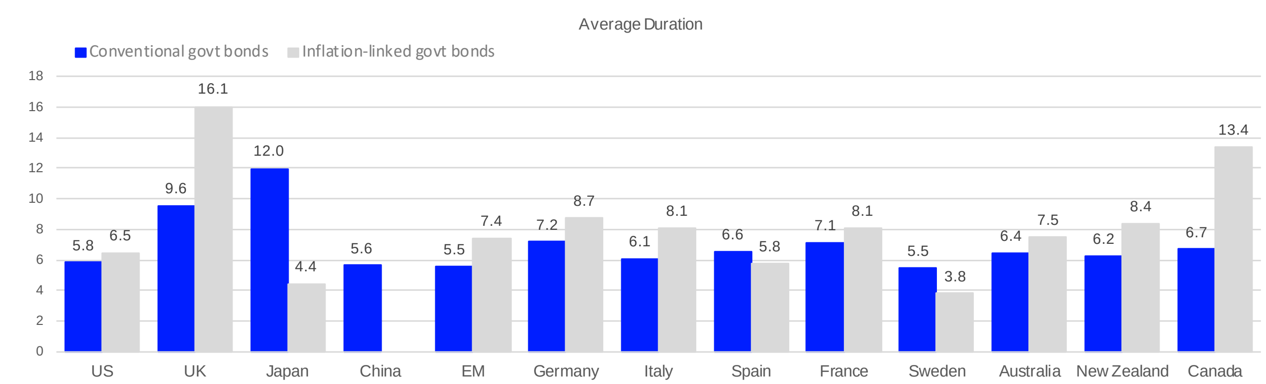
		Conventional government bonds				Inflation-linked bonds			Inv Grade	High Yld
		1-3YR	3-5YR	7-10YR	20+YR	1-5YR	5-10YR	20+YR	All Mat	All Mat
US	Current	4.82	4.39	4.35	4.63	2.57	2.14	2.27	5.64	8.71
	3M Ago	5.01	4.43	4.14	4.34	2.53	1.95	2.02	5.68	8.44
	6M Ago	4.66	3.98	3.69	4.00	2.09	1.54	1.68	5.47	8.82
	12M Ago	4.47	3.97	3.64	3.95	1.76	1.40	1.59	5.38	8.80
UK	Current	4.52	4.16	4.11	4.61	0.62	0.53	1.30		
	3M Ago	4.98	4.71	4.37	4.59	1.21	0.76	1.16		
	6M Ago	4.66	4.44	4.18	4.53	1.25	0.60	1.12		
	12M Ago	3.36	3.26	3.20	3.39	-1.95	-0.58	0.10		
Japan	Current	0.00	0.17	0.57	1.63	-2.08	-0.87			
	3M Ago	-0.01	0.15	0.53	1.54	-1.81	-0.77			
	6M Ago	-0.08	0.01	0.34	1.22	-1.53	-0.77			
	12M Ago	-0.04	0.05	0.28	1.40	-1.44	-0.76			
China	Current	2.37	2.47	2.66	3.05					
	3M Ago	2.08	2.30	2.59	2.93					
	6M Ago	2.16	2.39	2.72	3.14					
	12M Ago	2.26	2.54	2.87	3.34					
EM	Current					4.42	4.45	5.10	6.08	10.41
	3M Ago					2.83	4.26	4.99	6.17	11.42
	6M Ago					4.31	4.24	5.00	5.83	12.19
	12M Ago					2.45	3.14	5.10	6.08	12.18
Germany	Current	2.86	2.41	2.37	2.67	1.16	0.34	0.34		
	3M Ago	3.11	2.62	2.46	2.60	0.69	0.17	0.13		
	6M Ago	2.79	2.39	2.28	2.45	0.38	0.02	-0.10		
	12M Ago	2.04	1.95	1.91	1.81	-0.59	-0.41	-0.54		
Italy	Current	3.39	3.40	3.93	4.59	1.60	1.97	2.15		
	3M Ago	3.64	3.61	3.94	4.45	1.40	1.75	1.88		
	6M Ago	3.44	3.52	3.97	4.48	1.16	1.69	1.81		
	12M Ago	2.73	3.09	3.59	3.86	0.12	1.32	1.35		
France	Current	3.01	2.73	2.87	3.46	0.84	0.63	0.95		
	3M Ago	3.18	2.94	2.95	3.41	0.53	0.41	0.73		
	6M Ago	2.90	2.71	2.76	3.28	0.22	0.23	0.54		
	12M Ago	2.25	2.19	2.27	2.59	-0.94	-0.39	0.09		
Sweden	Current	3.27	2.70	2.61		1.30	1.12			
	3M Ago	3.48	3.07	2.81		1.34	1.15			
	6M Ago	3.01	2.66	2.37		0.71	0.57			
	12M Ago	2.52	2.21	1.93		-0.29	-0.26			
Australia	Current	4.15	4.04	4.36	4.73	1.28	1.81	2.19		
	3M Ago	3.91	3.80	4.03	4.47	1.02	1.49	1.90		
	6M Ago	3.55	3.44	3.65	4.17	0.46	1.08	1.62		
	12M Ago	3.12	3.22	3.49	3.92	-0.08	0.90	1.43		
New Zealand	Current	5.07	4.78	4.89	5.09	1.91	2.59			
	3M Ago	5.35	5.02	4.95	5.13	2.17	2.58			
	6M Ago	5.08	4.36	4.30	4.46	1.28	1.90			
	12M Ago	4.67	4.39	4.12	4.28	1.49	1.97			
Canada	Current	4.27	3.71	3.58	3.38	1.80	1.81	1.69		
	3M Ago	4.74	4.05	3.63	3.44	2.09	1.88	1.84		
	6M Ago	4.32	3.62	3.27	3.25	1.64	1.42	1.44		
	12M Ago	3.90	3.33	2.95	3.03	1.33	1.10	1.16		

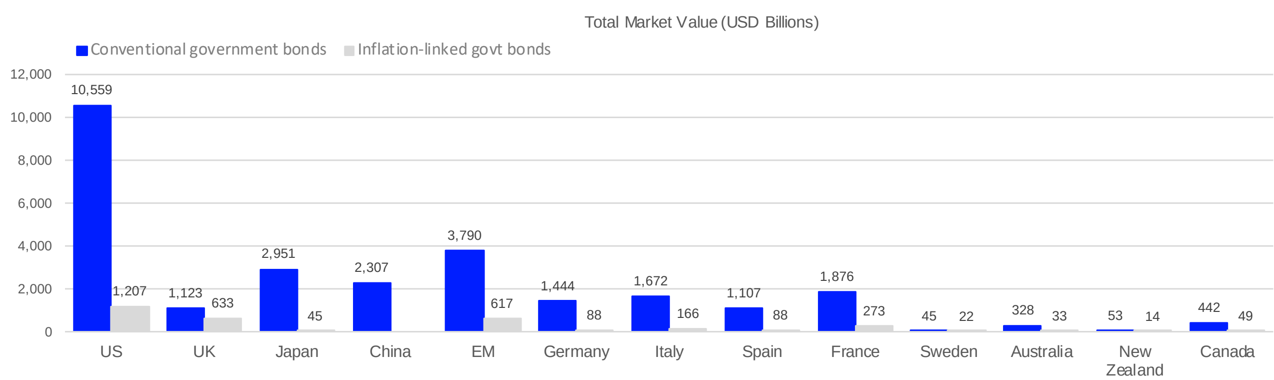
Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix – Duration and Market Value (USD, Bn) as of November 30, 2023

	Conventional government bonds								Inflation-linked government bonds					
	Duration				Market Value				Duration			Market Value		
	3-5YR	7-10YR	20+YR	Overall	3-5YR	7-10YR	20+YR	Total	5-10YR	20+YR	Overall	5-10YR	20+YR	Total
US	3.7	7.3	16.7	**5.8**	2,428.2	1,102.6	1,219.7	**10,559.2**	7.0	21.1	**6.5**	396.0	118.4	**1,207.2**
UK	3.6	7.5	18.2	**9.6**	128.7	179.5	309.5	**1,122.5**	6.8	27.1	**16.1**	101.8	238.1	**632.8**
Japan	3.9	8.0	23.7	**12.0**	354.7	348.3	632.9	**2,951.4**	7.1		**4.4**	18.4		**44.8**
China	3.7	7.5	17.6	**5.6**	548.0	387.3	260.5	**2,307.4**						
EM	3.6	6.9	15.8	**5.5**	836.6	695.8	361.2	**3,790.4**	5.8	13.6	**7.4**	112.3	169.9	**616.9**
Germany	3.8	7.5	20.5	**7.2**	317.4	235.3	163.8	**1,443.7**	7.0	21.5	**8.7**	44.2	18.6	**88.5**
Italy	3.6	7.1	16.1	**6.1**	312.9	273.5	139.2	**1,672.4**	7.6	26.1	**8.1**	61.1	5.2	**165.7**
Spain	3.6	7.4	17.6	**6.6**	210.4	189.8	96.9	**1,106.6**	6.6		**5.8**	23.2		**88.2**
France	3.6	7.5	19.7	**7.1**	297.5	327.4	214.9	**1,876.4**	6.4	24.2	**8.1**	106.3	20.2	**272.8**
Sweden	3.5	7.4		**5.5**	14.2	9.1		**45.3**	5.5		**3.8**	10.0		**21.6**
Australia	3.6	7.5	16.7	**6.4**	36.9	86.3	19.8	**327.5**	6.9	22.1	**7.5**	9.8	2.5	**33.3**
New Zealand	3.7	7.5	16.8	**6.2**	10.4	14.5	2.5	**52.5**	6.0		**8.4**	3.1		**13.8**
Canada	3.8	7.3	19.5	**6.7**	58.7	111.1	63.2	**442.0**	6.7	20.6	**13.4**	8.2	19.8	**48.7**

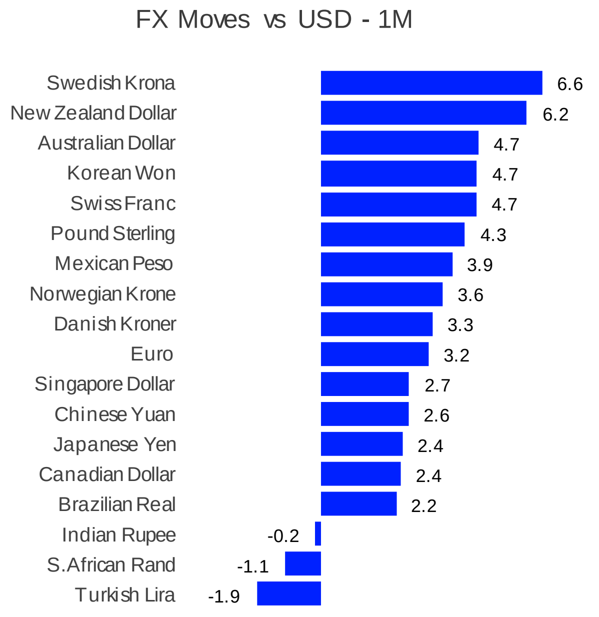
	Investment grade bonds										High Yield	
	Duration					Market Value					Duration	MktVal
	AAA	AA	A	BBB	Overall	AAA	AA	A	BBB	Overall		
US	10.4	8.3	7.1	6.5	6.9	71.5	445.0	2587.7	3328.5	6432.7	3.9	1029.3
Europe	5.7	4.8	4.6	4.2	4.4	10.8	195.0	1216.0	1472.0	2893.8		
EM		5.8	4.7	5.0	4.9		37.1	220.7	309.7	567.5	3.3	182.7

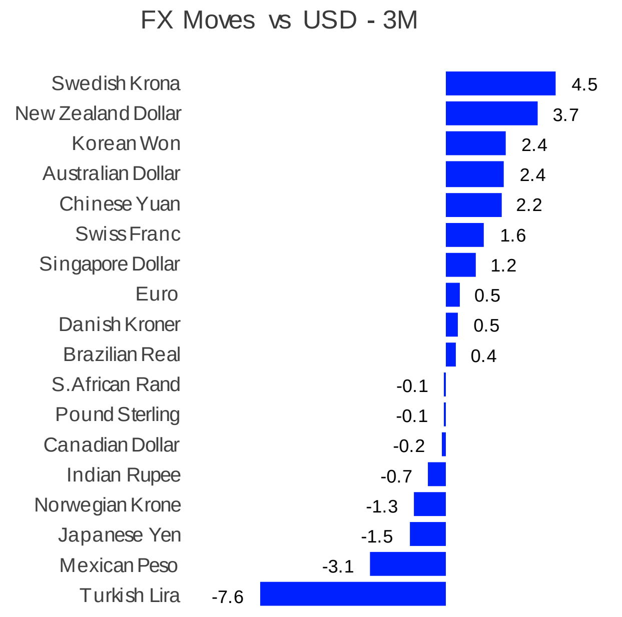


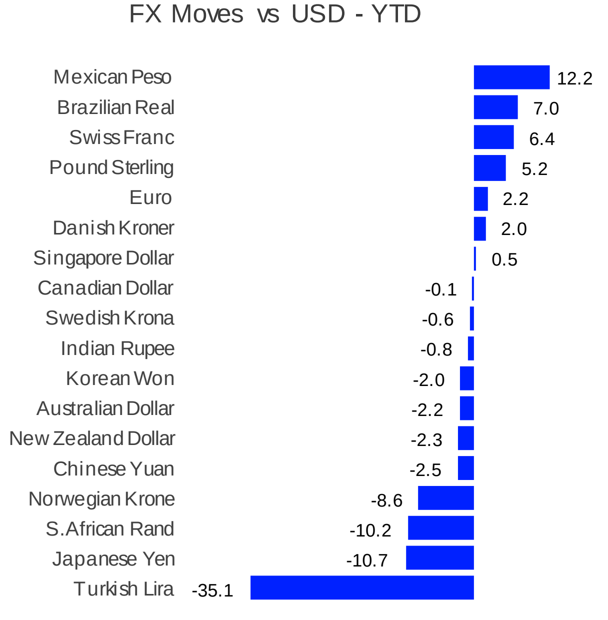


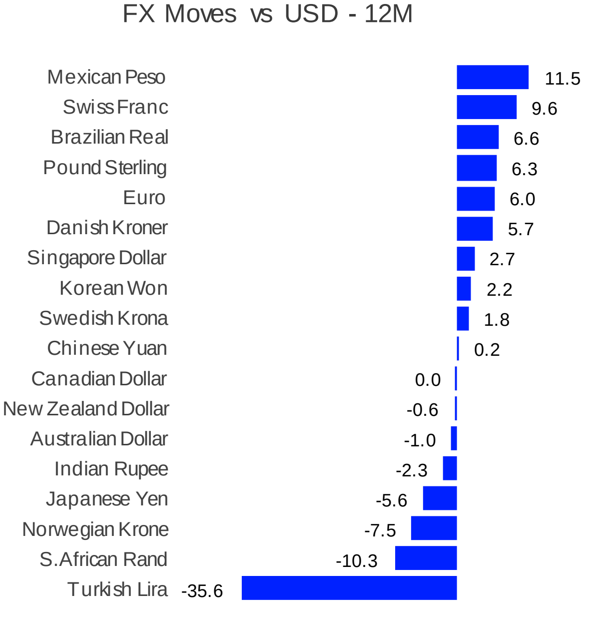
Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix – Foreign Exchange Returns % as of November 30, 2023









Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

Appendix - Glossary

Bond markets are based on the following indices:

FTSE World Government Bond Index (WGBI) for all global government bond markets

FTSE World Inflation-Linked Securities Index (WorldILSI) for all global inflation-linked bond markets

FTSE US Broad Investment-Grade Bond Index (USBIG®) for the US corporate bond market

FTSE US High-Yield Market Index for the US high yield bond market

FTSE Euro Broad Investment-Grade Bond Index (EuroBIG®) for the Euro-denominated corporate bond market

FTSE European High-Yield Market Index for the European high yield market

FTSE Chinese Government and Policy Bank Bond Index (CNGPBI) for the Chinese government bond market

FTSE Emerging Markets Inflation-Linked Securities Index (EMILSI) for the emerging markets inflation-linked bond market

FTSE Emerging Markets Government Bond Index (EMGBI) for the emerging markets government bond market. Please note that over 50% of this index is invested in China

FTSE Emerging Markets Broad Bond Index (EMUSDBBI) for the emerging markets corporate bond market

FTSE ESG World Government Bond Index for the global government bond markets with an ESG tilt

FTSE Climate Risk-Adjusted World Government Bond Index (Climate WGBI) and FTSE Advanced Climate Risk-Adjusted World Government Bond Index (Advanced Climate WGBI) for each country's relative exposure to climate risk, with respect to resilience and preparedness to the risks of climate change

List of Abbreviations used in charts:

IL = Inflation-linked bonds

IG = Investment-grade bonds

HY = High-yield bonds

BPS = Basis points

EM = Emerging market

LC = Local currency

Source: FTSE Russell. All data as of November 30, 2023. Past performance is no guarantee of future results. Please see the end for important legal disclosures. Bond market data is derived from FTSE Fixed Income Indices. See Appendix Glossary for list of indices used for each market. For professional investors only.

ABOUT FTSE RUSSELL
FTSE Russell is a leading global provider of index and benchmark solutions, spanning diverse asset classes and investment objectives. As a trusted investment partner we help investors make better-informed investment decisions, manage risk, and seize opportunities.

Market participants look to us for our expertise in developing and managing global index solutions across asset classes. Asset owners, asset managers, ETF providers and investment banks choose FTSE Russell solutions to benchmark their investment performance and create investment funds, ETFs, structured products, and index-based derivatives. Our clients use our solutions for asset allocation, investment strategy analysis and risk management, and value us for our robust governance process and operational integrity.

For over 35 years we have been at the forefront of driving change for the investor, always innovating to shape the next generation of benchmarks and investment solutions that open up new opportunities for the global investment community.

CONTACT US
To learn more, visit lseg.com/ftse-russell; email info@ftserussell.com; or call your regional Client Service team office:
EMEA +44 (0) 20 7866 1810
North America +1 877 503 6437
Asia-Pacific
Hong Kong +852 2164 3333
Tokyo +81 3 6441 1430
Sydney +61 (0) 2 7228 5659